




Proposed Adoption of California Climate Action Registry's Forestry Greenhouse Gas Protocols for Voluntary Purposes

October 25, 2007

 **California Air Resources Board**
California Environmental Protection Agency

1

THANK YOU MR. CACKETTE AND MEMBERS OF THE BOARD. MY NAME IS DR. JEANNE PANEK OF THE PLANNING AND TECHNICAL SUPPORT DIVISION AND I WILL BE PRESENTING THE STAFF'S RECOMMENDATIONS REGARDING THE ADOPTION OF THE CALIFORNIA CLIMATE ACTION ACTION REGISTRY FORESTRY GREENHOUSE GAS PROTOCOLS.



Overview

- **Today's Proposed Action**
- **Forestry Sector Background**
- **AB 32 Context**
- **CCAR Forest Protocols**
- **Next Steps and Recommendations**

2

HERE IS AN OVERVIEW OF TODAY'S PRESENTATION

FIRST I WILL GIVE A SUMMARY OF THE ACTIONS THAT WE ARE PROPOSING TO THE BOARD TODAY.

NEXT I WILL PROVIDE SOME BACKGROUND INFORMATION ON CALIFORNIA'S FORESTS AND THE OPPORTUNITIES THEY PRESENT FOR ADDRESSING CLIMATE CHANGE

I WILL THEN PROVIDE SOME CONTEXT ON HOW THE ADOPTION OF THIS PROTOCOL FITS INTO THE AB 32 PROCESS

THE LARGEST PORTION OF THE PRESENTATION WILL BE DEVOTED TO A DESCRIPTION OF THE CCAR FOREST PROTOCOLS

FINALLY, I WILL CONCLUDE WITH THE STAFF'S PROPOSALS FOR THE FUTURE AND OUR RECOMMENDATIONS TO THE BOARD.



Today's Proposed Action

- **Staff proposes adoption of California Climate Action Registry (CCAR) forestry protocols (non-regulatory)**
- **Endorse an ongoing process to develop further forestry GHG quantification approaches**

3

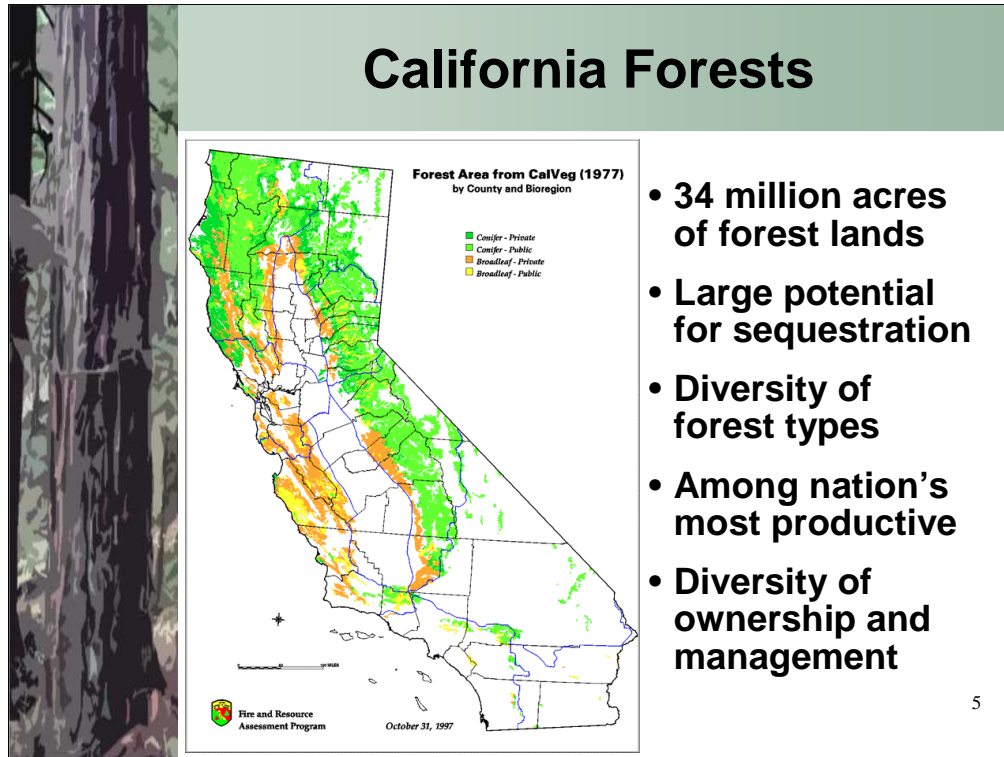
STAFF PROPOSES ADOPTION OF THE CALIFORNIA CLIMATE ACTION REGISTRY (OR CCAR) FORESTRY PROTOCOLS AS AN ACCOUNTING AND VERIFICATION METHOD FOR VOLUNTARY FOREST PROJECTS THAT REDUCE GHGS. THIS IS THE FIRST VOLUNTARY METHOD WE ARE PROPOSING FOR ADOPTION PURSUANT TO AB 32. ADOPTION OF THIS VOLUNTARY METHODOLOGY IS A NON-REGULATORY ACTION WHICH REPRESENTS BOARD ENDORSEMENT OF A TECHNICALLY SOUND APPROACH FOR CARBON ACCOUNTING IN FOREST PROJECTS.

WE ARE ALSO RECOMMENDING BOARD ENDORSEMENT OF AN ONGOING PROCESS TO SUPPORT DEVELOPMENT OF FURTHER GHG REDUCTION APPROACHES

I WANT TO EMPHASIZE THESE FORESTRY PROTOCOLS DO NOT ESTABLISH RULES FOR CARBON MARKETS, TRADING, OR OFFSETS. IT IS A METHODOLOGY FOR ESTIMATING CARBON EMISSION REDUCTIONS FROM CERTAIN TYPES OF VOLUNTARY FOREST PROJECTS. THESE PROTOCOLS DO NOT ADDRESS ALL POTENTIAL TYPES OF FOREST PROJECTS AND ARB STAFF IS PROPOSING A PROCESS TO DEVELOP ADDITIONAL QUANTIFICATION METHODS.



NOW I WOULD LIKE TO PROVIDE SOME BACKGROUND ON THE CALIFORNIA FOREST SECTOR



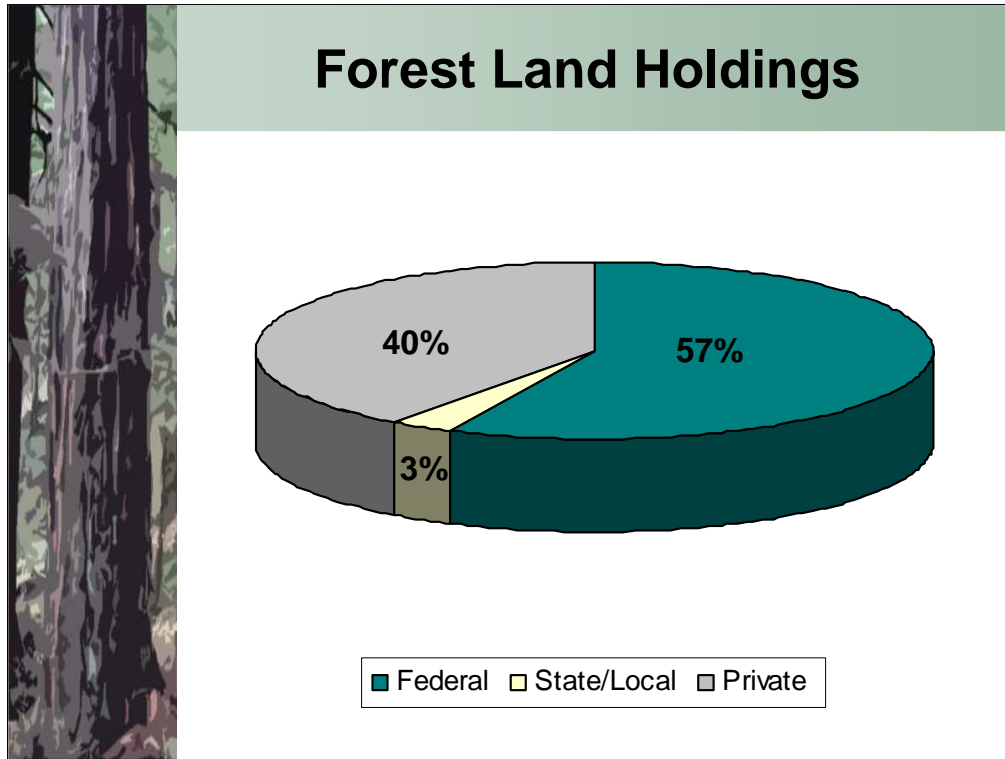
CALIFORNIA HAS ABOUT 34 MILLION ACRES OF FOREST LANDS THAT PROVIDE AN EXCEPTIONAL OPPORTUNITY TO ADDRESS THE STATE'S CLIMATE CHALLENGE.

THERE IS A LARGE POTENTIAL FOR SEQUESTRATION WHICH VARIES WITH FOREST TYPE, LOCATION, OWNERSHIP AND MANAGEMENT.

THE DIVERSITY OF FOREST TYPES INCLUDES A WIDE RANGE OF CONIFER AND BROADLEAF SPECIES. CONIFER FORESTS ARE SHOWN IN GREEN, BROADLEAF IN ORANGE/YELLOW.

THESE FORESTS – ALONG WITH OREGON AND WASHINGTON'S -- ARE AMONG THE NATION'S MOST PRODUCTIVE. THE GREATEST PRODUCTIVITY, AND THUS CARBON STORAGE, IS IN THE STATE'S NORTHERN REGION.

THERE IS A DIVERSITY OF FOREST OWNERSHIP AND MANAGEMENT, INCLUDING PUBLIC, PRIVATE, TIMBERLAND AND NON-TIMBERLAND.



THIS CHART SHOWS A PERCENTAGE BREAKDOWN OF FOREST LAND HOLDINGS IN CALIFORNIA. THE FEDERAL GOVERNMENT ADMINISTERS THE BULK OF CALIFORNIA’S FOREST LANDS (57%) WITH THE REMAINDER DIVIDED AMONG PRIVATE LAND HOLDERS (40%) AND STATE AND LOCAL GOVERNMENT (3%). COLLABORATING WITH FEDERAL AGENCIES WILL BE KEY TO ACHIEVING THE FULL MITIGATION POTENTIAL OF CALIFORNIA’S FORESTS.



Forests Can Remove Carbon From the Air

- **Forests remove CO₂ from the air by sequestering carbon**
- **Forested land sequestering approximately 14 MMTCO₂eq from the air annually**
- **Total carbon stored in California forests estimated to be 1.7 billion tons**

7

FORESTS PLAY A UNIQUE, COMPLEX AND IMPORTANT ROLE IN THE CARBON CYCLE. THEY REMOVE CARBON DIOXIDE FROM THE AIR AND STORE (OR SEQUESTER) CARBON LONG-TERM

THE RECENT ARB EMISSIONS INVENTORY ESTIMATES THAT FORESTS SEQUESTER ROUGHLY 14 MMTCO₂ ANNUALLY

THE CALIFORNIA DEPARTMENT OF FORESTRY ESTIMATES THE TOTAL CARBON STORED IN CALIFORNIA FORESTS TO BE ON THE ORDER OF 1.7 BILLION TONS



Forests Can Release Carbon Into the Air

- **Loss of forests decreases carbon stock and considered a CO₂ emission**
 - **Harvesting**
 - **Wildfire**
 - **Land-use conversion**
- **Emission related to harvesting**
 - **Soil disturbance**
 - **Burning debris**
 - **Decay process**
 - **Fuel combustion**

8

FORESTS ARE ALSO A SOURCE OF GHG EMISSIONS

IT IS IMPORTANT TO UNDERSTAND THAT IN THE FOREST SECTOR, DECREASES IN STANDING CARBON STOCK ARE CONSIDERED CO₂ EMISSIONS

FOREST EMISSIONS ARE PRIMARILY FROM HARVESTING AND WILDFIRE, BUT LAND-USE CONVERSION FROM FOREST TO NON-FOREST IS AN EMISSION SOURCE AS WELL

HARVESTING ACTIVITY HAS ASSOCIATED EMISSIONS INCLUDING
SOIL DISTURBANCE FROM EQUIPMENT AND ROAD BUILDING
BURNING DEBRIS SUCH AS BRANCHES AND BARK REMAINING AFTER LOG EXTRACTION
DECAY PROCESS OF MATERIAL LEFT ON-SITE
FUEL COMBUSTION FROM EQUIPMENT



Forest Sector Challenges

- **Environmental issues are complex**
 - Air
 - Water
 - Habitat preservation
 - Wildfire
- **Diverse stakeholder interests**

9

ADDRESSING THE ISSUES OF THE FOREST SECTOR PRESENTS A NUMBER OF CHALLENGES. IN ADDITION TO CARBON BENEFITS, FORESTS PROVIDE ECOLOGICAL, CULTURAL, RECREATIONAL, AND ECONOMIC BENEFITS, WHICH CAN LEAD TO A VARIETY OF ENVIRONMENTAL ISSUES SUCH AS:

AIR QUALITY

WATER QUALITY

HABITAT PRESERVATION

AND WILDFIRE

IN ADDITION TO THESE ISSUES, THE FOREST SECTOR HAS DIVERSE STAKEHOLDER INTERESTS. AS WE WORK TO ADDRESS CLIMATE CHANGE IN THE CONTEXT OF THE WIDE-RANGING ISSUES INVOLVED IN FOREST MANAGEMENT, WE PROPOSE A BROAD BASED PUBIC PROCESS TO EXPLORE THE POTENTIAL FOR THIS SECTOR TO PROVIDE SIGNIFICANT GREENHOUSE GAS REDUCTIONS



I WANT TO TAKE A COUPLE OF MINUTES TO PROVIDE SOME BACKGROUND ON HOW OUR RECOMMENDATIONS FIT INTO THE OVERALL CONTEXT OF AB 32.



AB 32 Requirements

- **Adopt methodologies for the quantification of voluntary GHG emission reductions (non-regulatory)**
- **Adopt regulations to verify and enforce voluntary GHG reductions**


11

AB 32 REQUIRES ARB TO ADOPT METHODOLOGIES FOR THE
QUANTIFICATION OF VOLUNTARY GHG EMISSION REDUCTIONS.
THIS IS NON-REGULATORY

HOWEVER, AB 32 REQUIRES ARB TO ADOPT REGULATIONS TO VERIFY
AND ENFORCE VOLUNTARY REDUCTIONS IF THEY ARE USED TO MEET
STATE EMISSION LIMITS

TODAY'S ACTION IS PURSUANT TO THE FIRST REQUIREMENT

THE VERIFICATION AND ENFORCEMENT REGULATION WILL BE A
FUTURE ACTION WHICH WILL INVOLVE A FULL PUBLIC PROCESS OF
ITS OWN



AB 32 Requirements for Reductions

- Real
- Quantifiable
- Permanent
- Verifiable
- Enforceable
- Not otherwise required and would not otherwise occur (additionality)

12

AB 32 REQUIRES THAT REDUCTIONS MEET CERTAIN STANDARDS.
THAT IS THAT THEY ARE:

REAL


QUANTIFIABLE

PERMANENT

VERIFIABLE

ENFORCEABLE

NOT OTHERWISE REQUIRED AND WOULD NOT OTHERWISE OCCUR,
THAT IS ADDITIONALITY



International Voluntary Carbon Standard (2007)

- **Sets international criteria**
- **Participating organizations**
 - **International Emissions Trading Association**
 - **World Business Council for Sustainable Development**
 - **World Economic Forum**
 - **The Climate Group**
- **Accounting criteria consistent with AB32**
- **AB 32 more explicit on enforceability**

13

THE VOLUNTARY CARBON STANDARD, RELEASED IN JULY OF THIS YEAR SETS INTERNATIONAL CRITERIA FOR VOLUNTARY REDUCTIONS

PARTICIPATING ORGANIZATIONS INCLUDE THE INTERNATIONAL EMISSIONS TRADING ASSOCIATION, THE WORLD BUSINESS COUNCIL ON SUSTAINABLE DEVELOPMENT, THE WORLD ECONOMIC FORUM AND THE CLIMATE GROUP

THESE ACCOUNTING CRITERIA ARE CONSISTENT WITH AB32

AB32 ALSO INCLUDES AN EXPLICIT REQUIREMENT FOR ENFORCEABILITY OF EMISSIONS REDUCTIONS USED TO MEET THE 2020 TARGET.



NOW I WOULD LIKE TO TURN OUR ATTENTION TO THE CCAR FOREST PROTOCOLS THEMSELVES



Overview of CCAR Forest Protocols

- **Provide rigorous carbon accounting methods for voluntary projects**
- **Developed with extensive technical and stakeholder input**
- **Reflects international criteria**
- **Meets requirements of SB 812**
- **Supported by Board of Forestry in 2004 and adopted by CCAR Board in 2005**

15

CCAR HAS DEVELOPED A NUMBER OF VOLUNTARY PROTOCOLS INCLUDING A SET OF FORESTRY PROTOCOLS FOR RIGOROUS CARBON ACCOUNTING FROM THE FOREST SECTOR. THESE WERE THE FIRST PROTOCOLS WORLDWIDE TO RECOGNIZE FOREST MANAGEMENT AS A GHG REDUCTION APPROACH, THUS HELPING THE INTERNATIONAL COMMUNITY MOVE BEYOND REFORESTATION AS THE ONLY OPPORTUNITY FOR FOREST GHG REDUCTIONS.

THE FORESTRY ACCOUNTING PROTOCOLS REPRESENT THE WORK OF LEADING EXPERTS IN THE FIELD OF FORESTRY AND IN PROTOCOL DEVELOPMENT, THE INPUT OF STAKEHOLDERS AND THE PUBLIC OVER AN EXTENSIVE 4-YEAR OPEN, PUBLIC PROCESS, INCLUDING WORKSHOPS AND A FORMAL PUBLIC COMMENT PERIOD

THE CCAR PROTOCOLS REFLECT INTERNATIONAL STANDARDS AND MEET THE REQUIREMENTS OF SB 812. I WILL DISCUSS SB 812 IN MORE DETAIL LATER IN THE PRESENTATION.

THE PROTOCOLS WERE SUPPORTED BY THE BOARD OF FORESTRY IN 2004 AND ADOPTED BY THE CCAR BOARD IN 2005. THEY WERE ALSO THE SUBJECT OF A GREEN CALIFORNIA AWARD FOR STATE ACHIEVEMENT IN ENVIRONMENTAL EFFORTS IN 2007.



SB 812 Requirements

- **CCAR responsible for developing protocol**
- **Conservation management criteria**
- **Permanent conservation easement**
- **Reductions must exceed all federal, state, and local requirements**


16

IN 2002 SB 812 REQUIRED CCAR TO DEVELOP FOREST PROTOCOLS TO CREATE CLIMATE BENEFITS USING CONSERVATION-BASED CRITERIA WHICH MAINTAIN CALIFORNIA'S NATIVE FORESTS, BIODIVERSITY, WATER QUALITY AND SPECIES HABITAT.

SB812 REQUIRED CCAR TO ADOPT PROCEDURES AND CRITERIA FOR ACHIEVING CARBON EMISSION REDUCTION THROUGH "PROTECTION, RESTORATION AND MANAGEMENT OF CALIFORNIA'S NATIVE FORESTS".

THIS BILL ALSO REQUIRES THAT REGISTERED FOREST PROJECTS SECURE REDUCTIONS WITH A PERMANENT CONSERVATION EASEMENT FOR LONG-TERM CARBON SECURITY.

THE BILL REQUIRES THE PROTOCOLS RECOGNIZE ONLY THOSE PRACTICES THAT EXCEED ALL FEDERAL, STATE AND LOCAL REGULATIONS, THAT IS REGULATORY ADDITIONALITY



CCAR Forest Protocols: Description

1. **Sector (Entity)** - for entity-wide emissions
2. **Project** - for forest project reductions
3. **Certification** - guidance for certifiers

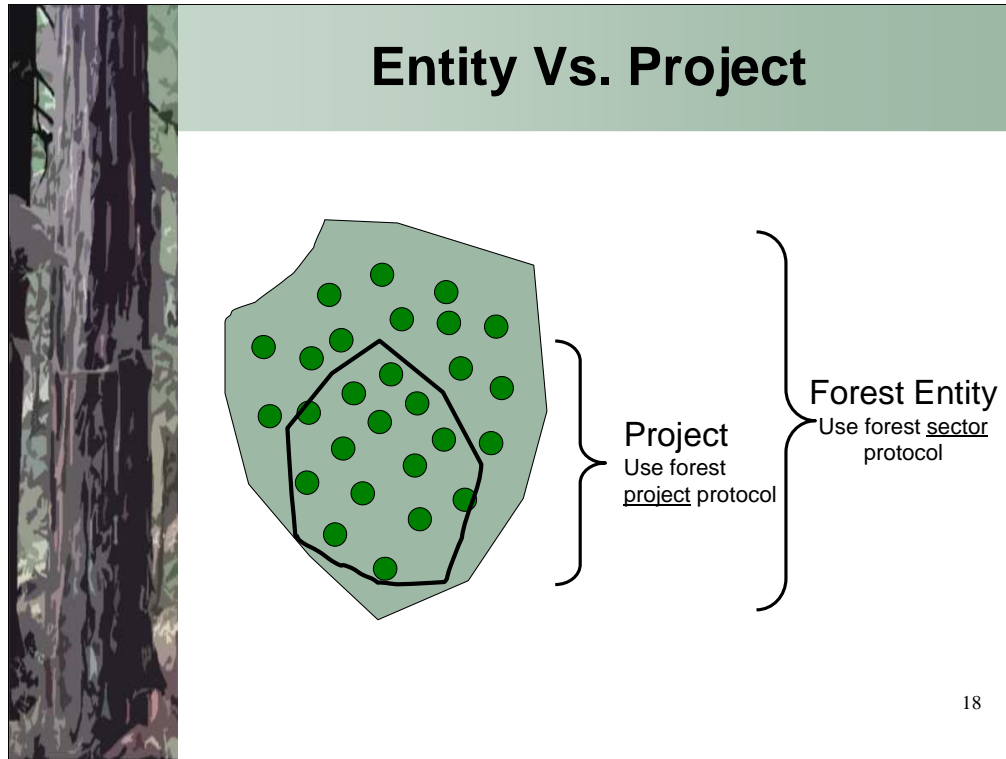
17

CCAR DEVELOPED THREE FOREST PROTOCOLS THAT ARE MEANT TO BE USED TOGETHER:

THE SECTOR PROTOCOL IS USED TO REPORT ENTITY-WIDE EMISSIONS. CCAR'S OFFICIAL TITLE FOR THIS PROTOCOL IS THE "SECTOR" PROTOCOL, HOWEVER FOR CLARITY PURPOSE WE PREFER THE TERM "ENTITY" SINCE THE PROTOCOL DOES NOT PROVIDE ACCOUNTING METHODOLOGIES FOR THE ENTIRE FOREST SECTOR, BUT RATHER FOR THE FOREST ENTITY.

THE PROJECT PROTOCOL IS USED FOR FOREST PROJECT REDUCTIONS, THAT IS STOCK INCREASES

THE CERTIFICATION PROTOCOL IS USED TO PROVIDE GUIDANCE FOR FOREST CERTIFIERS.




GEOGRAPHIC AND ORGANIZATIONAL BOUNDARIES MUST BE DEFINED FOR THE FOREST ENTITY AND PROJECT.

GEOGRAPHIC BOUNDARIES MAY OR MAY NOT BE ENTIRELY WITHIN CALIFORNIA, BUT AS OF NOW ONLY CALIFORNIA CARBON STOCKS AND EMISSION SOURCES CAN BE CERTIFIED.

ORGANIZATIONAL BOUNDARIES REFER TO AN ENTITY'S SHARE OF OWNERSHIP OR CONTROL

IF AN ENTITY IS ALSO UNDERTAKING A FOREST GHG EMISSION REDUCTION PROJECT, THEN THE BOUNDARIES OF THAT MUST ALSO BE DEFINED. A PROJECT MAY BE PART OR ALL OF A FOREST ENTITY.



Sector (Entity) Protocol

- Entity reporting by individual, corporation, or agency
- May establish baseline
- Report annual changes in carbon stock
- Increases in stock registered through project protocol

19

ENTITY-WIDE REPORTING IS DONE BY AN INDIVIDUAL, CORPORATION OR AGENCY OWNING AT LEAST 100 ACRES OF FORESTED LAND

BASELINE REPORTING IS OPTIONAL AT THE ENTITY LEVEL BUT STRONGLY ENCOURAGED

GHG EMISSIONS AND CARBON STOCKS ARE REPORTED ANNUALLY TO GET AN OVERVIEW OF AN ENTITY'S EMISSIONS INVENTORY AND AS A REFERENCE AGAINST WHICH TO TRACK FUTURE TRENDS

SPECIFIC PROJECTS DESIGNED TO INCREASE CARBON STOCKS ARE REGISTERED THROUGH THE PROJECT PROTOCOL



CCAR Forest Project Protocol

- Project protocol used for carbon *reduction* accounting
- Covers three forest project types
- Baseline requirements different for each project type
- Provides approaches for estimating carbon stock
- Protocol elements designed to keep carbon reductions additional and permanent

20


THE CCAR FOREST PROJECT PROTOCOL IS USED FOR ACCOUNTING OF PLANNED ACTIVITIES TO ACHIEVE CARBON REDUCTIONS. THE NEXT FEW SLIDES WILL ELABORATE ON EACH OF THE FOLLOWING:

THE PROTOCOLS COVER THREE CARBON REDUCTION PROJECT TYPES

THE BASELINE REQUIREMENTS ARE DIFFERENT FOR EACH PROJECT TYPE

THE PROTOCOL PROVIDES APPROACHES FOR QUANTIFYING CARBON STOCK

ELEMENTS OF THE PROTOCOL HELP ENSURE PERMANENCE AND ADDITIONALITY IN CARBON REDUCTIONS.



Protocol Project Types

Three project types:

- **Reforestation**
- **Conservation-based Management**
- **Conservation**

21


THE THREE PROJECT TYPES ARE

REFORESTATION

CONSERVATION-BASED FOREST MANAGEMENT (MANAGING FORESTS TO INCREASE CARBON STOCKS), AND

CONSERVATION (AVOIDED FOREST CONVERSION).

THESE PROVIDE AN ACCOUNTING FRAMEWORK FOR MAXIMIZING CARBON SEQUESTRATION AND MINIMIZING CARBON LOSS WITHOUT COMPROMISING OTHER FOREST BENEFITS



Baseline Criteria for Project Types

- **Reforestation:** ten years without tree cover
- **Conservation:** data on planned development or specific land conversion trends
- **Conservation-based management:** land will be managed pursuant to specific criteria in California Forest Practice Rules

22

ADDITIONALITY IS MEASURED RELATIVE TO A BASELINE, WHICH IS DEFINED DIFFERENTLY FOR EACH PROJECT TYPE.

REFORESTATION PROJECTS INCLUDE LANDS THAT HAVE BEEN OUT OF TREE COVER FOR AT LEAST 10 YEARS. THE BASELINE FOR THIS PROJECT TYPE IS THE CARBON STOCK PRIOR TO THE PROJECT'S START, OFTEN THIS IS ZERO OR NEAR ZERO.

THE CONSERVATION BASELINE REFLECTS DATA ON PLANNED DEVELOPMENT OR SPECIFIC LAND CONVERSION TRENDS

THE CONSERVATION-BASED MANAGEMENT BASELINE ASSUMES LAND WILL BE MANAGED PURSUANT TO SPECIFIC CRITERIA IN CALIFORNIA FOREST PRACTICE RULES



Quantifying Carbon Stocks

- **Accounting of carbon stored in live trees and dead biomass**
- **Protocols use California equations from nation-wide USFS study**
- **Site-specific data allowed**
- **Annual reporting**
- **Optional elements (shrubs, soil, litter/duff, wood products)**

23


THE QUANTIFICATION METHODS DESCRIBED HERE ARE COMMON TO SECTOR AND PROJECT PROTOCOLS:

THE PROTOCOLS REQUIRE MEASUREMENT OF CARBON IN LIVE TREES AND DEAD BIOMASS

THE PROTOCOLS USE CALIFORNIA BIOMASS EQUATIONS FROM A NATION-WIDE U.S. FOREST SERVICE STUDY, HOWEVER THE PROTOCOLS ENCOURAGE THE USE OF SITE-SPECIFIC EQUATIONS AND MODELS

CARBON STOCKS ARE CALCULATED FROM BIOMASS VALUES AND ARE REPORTED ANNUALLY

MEASUREMENTS ARE OPTIONAL IN SHRUBS, SOIL, LITTER/DUFF, AND WOOD PRODUCTS



Additionality

- Practices that exceed “business-as-usual”
- Exceed mandatory requirements
- Required by AB32
- Internationally recognized criterion


24

ADDITIONALITY IS REQUIRED BECAUSE BUSINESS-AS-USUAL PRACTICES HAVE NO NET GHG BENEFIT. IT IS THE ADDITIONAL INCREMENT AND STORAGE OF CARBON BEYOND BUSINESS AS USUAL THAT PROVIDES THE BENEFIT TO THE ATMOSPHERE

ADDITIONALITY IS DEFINED AS PRACTICES THAT EXCEED “BUSINESS-AS-USUAL”

AND IS DETERMINED RELATIVE TO A BASELINE AND TO STANDING LEGAL AND OTHER MANDATORY REQUIREMENTS.

AS MENTIONED EARLIER, ADDITIONALITY IS REQUIRED BY AB32
IT IS ALSO AN INTERNATIONALLY RECOGNIZED CRITERION FOR GHG REDUCTIONS



Permanence

- **CCAR project protocol requires permanent conservation easement**
- **Attaches liability to land, not owner**
- **Other approaches will be considered moving forward**

25

PERMANENCE IS REQUIRED TO OFFSET EMISSIONS OF GHGS TO THE ATMOSPHERE, WHICH CREATE A LONG-TERM WARMING EFFECT LASTING IN THE ATMOSPHERE FROM 5 TO 50,000 YEARS.

THE PROJECT PROTOCOL REQUIRES THE FOREST LAND BE SECURED WITH A PERMANENT CONSERVATION EASEMENT, WHICH IS THE BEST AVAILABLE LEGAL MECHANISM TO ENSURE LONG-TERM SECURITY OF THE CARBON STOCKS

A CONSERVATION EASEMENT ATTACHES LIABILITY TO THE LAND, NOT THE OWNER, SO IF OWNERSHIP CHANGES THE SUBSEQUENT OWNER IS BOUND BY THE TERMS OF THE EASEMENT

WE HAVE RECEIVED COMMENTS THAT THIS REQUIREMENT IS A BARRIER TO PARTICIPATION BY A LARGE FRACTION OF PRIVATE LANDOWNERS, SO OTHER (AND EQUALLY) INTERNATIONALLY-RECOGNIZED APPROACHES TO PERMANENCE WILL BE CONSIDERED AS WE MOVE FORWARD



Certification Protocol

- **Independent review of completeness, consistency, and accuracy**
- **Must include a Registered Professional Forester**
- **Review annual monitoring reports**

26

THE FINAL PROTOCOL, THE FOREST CERTIFICATION PROTOCOL – PROVIDES GUIDANCE FOR CERTIFIERS OF FOREST ENTITY AND PROJECT ACCOUNTING

INDEPENDENT THIRD PARTY REVIEW ENSURES COMPLETENESS, CONSISTENCY, AND ACCURACY OF DATA

CERTIFIERS MUST INCLUDE A REGISTERED PROFESSIONAL FORESTER, WHICH IS THE PERSON QUALIFIED TO ASSESS WHETHER THE REPORTING ENTITY HAS MADE APPROPRIATE USE OF METHODOLOGIES, ASSUMPTIONS, MODELS, AND CALCULATIONS.

CERTIFIERS REVIEW ANNUAL REPORTS TO DETERMINE IF THE REPORTED DATA IS FREE OF MATERIAL MISSTATEMENTS



CCAR Protocols In Practice

- **Two projects in certification process**
 - Garcia River Forest
 - Van Eck Forest
- **Management plans include continued harvest**
- **Value of additional stored carbon provides incentive**

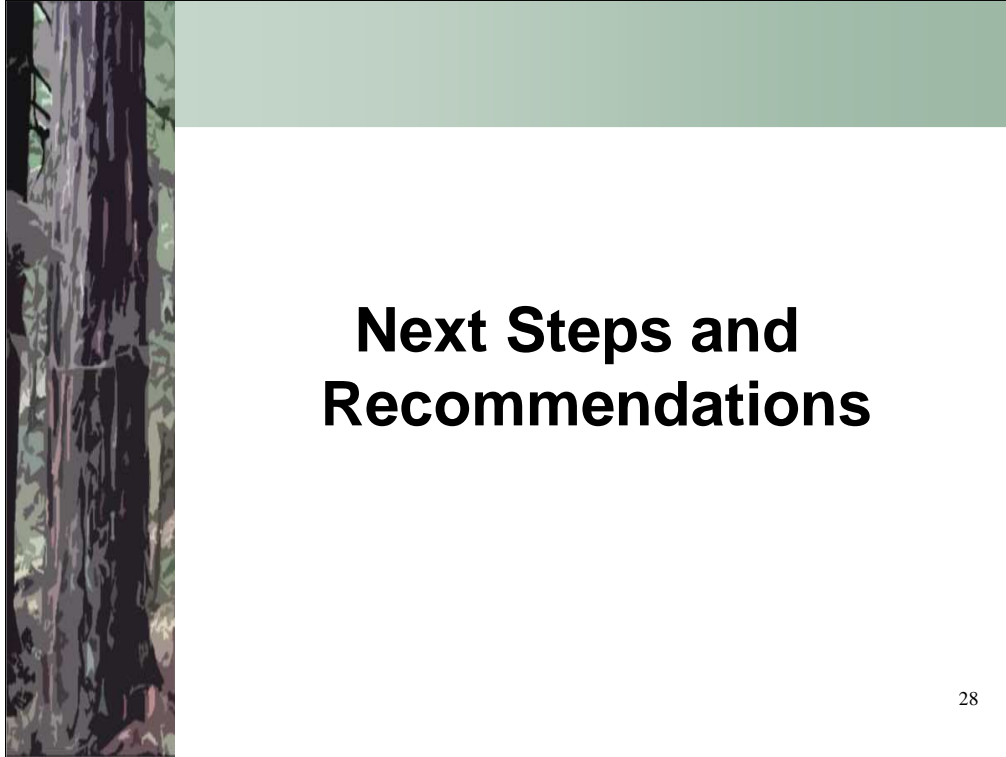
27

TWO FOREST PROJECTS HAVE REGISTERED AND REPORTED WITH CCAR AND ARE CURRENTLY IN THE CERTIFICATION PROCESS, GARCIA RIVER FOREST AND VAN ECK FOREST

THESE PROJECTS ILLUSTRATE SOME CONCEPTS REGARDING THE CONSERVATION-BASED FOREST MANAGEMENT PROJECT TYPE.

THE MANAGEMENT PLANS FOR BOTH FORESTS INCLUDE CONTINUED HARVEST

THE ADDITIONAL CARBON STORED IN INCREASED FOREST STOCKS PROVIDES A NEW TYPE OF “FOREST PRODUCT”, AND AN ADDED INCENTIVE, AS WELL AS A SOURCE OF ECOLOGICAL CO-BENEFITS.



I WOULD LIKE TO CONCLUDE THIS PRESENTATION WITH THE STAFF'S
PROPOSED NEXT STEPS AND RECOMMENDATIONS FOR BOARD ACTION



Process for Additional Methodologies


- **ARB/Resources Agency Forest Sector Workgroup**
- **Continue to work in conjunction with CCAR on additional forest quantification methodologies**
- **Encourage broad participation from forest sector in GHG reduction projects**

29

ARB STAFF'S NEXT STEPS WILL BE TO CONVENE AN ARB AND RESOURCES AGENCY FOREST SECTOR WORKGROUP TO DEVELOP FURTHER APPROACHES FOR VOLUNTARY FOREST ACCOUNTING METHODS AND PROTOCOLS

THIS GROUP WILL CONTINUE TO WORK IN CONJUNCTION WITH CCAR ON ADDITIONAL VOLUNTARY FOREST QUANTIFICATION METHODOLOGIES

ARB STAFF WILL WORK TO ENCOURAGE BROAD PARTICIPATION FROM THE FOREST SECTOR IN GHG REDUCTION PROJECTS THAT PROMOTE SOUND ENVIRONMENTAL PRINCIPLES.



CCAR Activities

- **CCAR has established process for developing protocols**
- **Expand scope of forest protocols outside of California**
- **Continue to develop additional approaches for the forest sector**

30

CCAR HAS AN ESTABLISHED AND WELL-DEFINED PROCESS FOR DEVELOPING PROTOCOLS WHICH WILL BE A GREAT RESOURCE AS THE WORK GROUP MOVES FORWARD TO DEVELOP NEW PROJECT PROTOCOLS

ONE OF THE CHALLENGES THEY WILL TAKE ON IS TO EXPAND THE SCOPE OF THE FOREST PROTOCOLS OUTSIDE OF CALIFORNIA

WITH THE FOREST SECTOR WORKGROUP, CCAR WILL CONTINUE TO DEVELOP ADDITIONAL APPROACHES FOR THE FOREST SECTOR



Areas of Future Work

- **Develop additional approaches for:**
 - **Forest management**
 - **Public lands**
 - **Urban forests**
 - **Biomass utilization/Wildfire avoidance**

31

WE RECOGNIZE THAT THE DIVERSITY OF FOREST LAND HOLDERS AND FOREST USES IN THE STATE DOES NOT LEND ITSELF TO A ONE SIZE FITS ALL APPROACH. THROUGH THE FOREST WORKGROUP, ARB STAFF PLANS TO CONTINUE ITS WORK IN THE FORESTRY SECTOR BY DEVELOPING VOLUNTARY GHG APPROACHES THAT ADDRESS ISSUES RELATED TO:

FOREST MANAGEMENT

PUBLIC LANDS

URBAN FORESTS

BIOMASS UTILIZATION COMBINED WITH WILDFIRE AVOIDANCE



Staff Recommendations

- **Adopt the California Climate Action Registry Forestry Protocols for voluntary GHG accounting**
- **Endorse an ongoing process to support development of further GHG reduction approaches**

32

STAFF RECOMMENDS THAT THE BOARD ADOPT THE CALIFORNIA CLIMATE ACTION REGISTRY FORESTRY PROTOCOLS FOR VOLUNTARY GHG ACCOUNTING.

AND FURTHERMORE, STAFF PROPOSES THAT THE BOARD ENDORSE AN ONGOING PROCESS TO SUPPORT DEVELOPMENT OF FURTHER GHG REDUCTION APPROACHES